

1 **In the Claims:**

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3 1. (Currently Amended) A system, comprising:

4 a camera to obtain an image of a cargo space; and

5 an image evaluator to recognize lines within the image, and to evaluate the

6 lines for indications of ~~eargo~~cargo; and

7 a projection pattern image library comprising a projection pattern image;

8 wherein the image evaluator is configured to compare the image to the

9 projection pattern image.

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11 2. (Original) The system of claim 1, wherein the camera comprises an

12 infrared (IR) imaging device.

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14 3. (Original) The system of claim 1, wherein the lines include straight

15 lines or curves.

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17 4. (Original) The system of claim 1, wherein the indications are

18 selected from a group consisting of:

19 slope of at least one of the recognized lines;

20 change in brightness along at least one of the recognized lines; and

21 discontinuity in at least one of the recognized lines.

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1 5. (Original) The system of claim 1, additionally comprising:
2 a projection pattern generator to trace a laser over a projection pattern
3 within the cargo space, wherein the projection pattern comprises the lines within
4 the image.

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6 6. (Original) The system of claim 5, wherein the laser and the camera
7 are separately located to enhance the camera's perspective to view of slope of at
8 least one of the recognized lines.

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10 7. (Original) The system of claim 1, additionally comprising:
11 an edge detection module to detect edges of surfaces defining the cargo
12 space, wherein the edges comprise the lines within the image.

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14 8. (Currently Amended) The system of claim 1, additionally
15 comprising:

16 ~~a projection pattern image library comprising a projection pattern image;~~
17 and

18 ~~wherein the image evaluator is configured to compare the image to the~~
19 ~~projection pattern image wherein evaluating the lines comprises recognizing two~~
20 different distances between portions of two lines is an indication of cargo.

1 **9.** (Currently Amended) A processor-readable medium comprising
2 processor-executable instructions for:

3 sensing lines within an image of a cargo space;

4 evaluating the lines; and

5 basing an indication of presence of cargo on the ~~evaluation~~-evaluation;

6 wherein the evaluating comprises instructions for:

7 measuring distances between lines within a projection pattern; and

8 determining if the measured distances indicate the presence of cargo.

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10 **10.** (Original) A processor-readable medium as recited in claim 9,
11 wherein the lines are formed by instructions for tracing a laser over a pattern
12 within the cargo space.

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14 **11.** (Original) A processor-readable medium as recited in claim 9,
15 wherein the lines are formed by instructions for intersection of planes defining the
16 cargo space.

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18 **12.** (Cancel)

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20 **13.** (Original) A processor-readable medium as recited in claim 9,
21 wherein the evaluating comprises instructions for measuring slope of lines within
22 a projection pattern.

1 **14.** (Original) A processor-readable medium as recited in claim 9,
2 wherein the evaluating comprises instructions for reviewing lines within a
3 projection pattern for breaks in continuity.

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5 **15.** (Original) A processor-readable medium as recited in claim 9,
6 wherein the evaluating comprises instructions for measuring uniformity of
7 brightness of lines within a projection pattern.

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9 **16.** (Currently Amended) A processor-readable medium comprising
10 processor-executable instructions for:

11 forming a pattern within a cargo space using a laser and lines formed by
12 intersection of planes forming the cargo space;

13 obtaining an image of the pattern;

14 analyzing the image, wherein the analyzing comprises measuring distances
15 between lines within the pattern and comparing the measurements to expected
16 measurements; and

17 basing an indication of cargo presence on the analysis.

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19 **17.** (Original) A processor-readable medium as recited in claim 16,
20 wherein the forming comprises instructions for comparing the image to images
21 within a projection pattern image library.

1 **18.** (Original) A processor-readable medium as recited in claim 16,
2 wherein the obtaining comprises instructions for operating a camera to capture the
3 image.

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5 **19.** (Cancel)

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7 **20.** (Original) A processor-readable medium as recited in claim 16,
8 wherein the analyzing comprises instructions for recognizing a slope change, in a
9 line within the pattern, indicating cargo presence.

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11 **21.** (Original) A processor-readable medium as recited in claim 16,
12 wherein the analyzing comprises instructions for recognizing brightness change, in
13 a line within the pattern, indicating cargo presence.

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15 **22.** (Original) A processor-readable medium as recited in claim 16,
16 wherein the analyzing comprises instructions for recognizing discontinuities, in a
17 line within the pattern, indicating cargo presence.

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19 **23.** (Currently Amended) A cargo sensing device, comprising:
20 means for defining a ~~projection~~ pattern within a cargo space, wherein the
21 pattern is formed by projection and by lines formed by intersection of planes
22 forming the cargo space;

23 means for obtaining an image of the projection pattern;
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1 means for measuring distortion of the projection pattern within the image;
2 and
3 means for comparing the distortion to a threshold value.
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5 **24.** (Original) The cargo sensing device of claim 23, wherein the means
6 for comparing is a means selected from a group consisting of:

7 means for recognizing slope of at least one of the recognized lines
8 indicating cargo presence;

9 means for recognizing change in brightness along at least one of the
10 recognized lines indicating cargo presence; and

11 means for recognizing discontinuity in at least one of the recognized lines
12 indicating cargo presence.
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14 **25.** (Original) The cargo sensing device of claim 23, wherein the
15 projection pattern is defined by lines resulting from intersection of planes defining
16 the cargo space.
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18 **26.** (Original) The cargo sensing device of claim 23, wherein the means
19 for measuring distortion measures distances between lines within the projection
20 pattern.
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1 **27.** (Original) The cargo sensing device of claim 23, wherein the means
2 for measuring distortion to the projection pattern recognizes discontinuities in
3 lines within the projection pattern.

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5 **28.** (Original) The cargo sensing device of claim 23, wherein the means
6 for measuring distortion compares the image of the projection pattern to images
7 within projection pattern image library.

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9 **29.** (Currently Amended) A method of determining cargo presence,
10 comprising:

11 defining a ~~projection~~-pattern within a cargo space, wherein the pattern is
12 formed by projection and by lines formed by intersection of planes forming the
13 cargo space;

14 capturing an image of the projection pattern with a camera;

15 evaluating lines within the projection pattern for evidence of cargo; and

16 basing an indication of cargo presence on the evaluation.

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18 **30.** (Original) The method of claim 29, wherein the projection pattern is
19 defined by tracing over a pattern repeatedly with a laser.

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21 **31.** (Original) The method of claim 29, wherein the projection pattern is
22 defined by intersection of planes defining the cargo space.

1 **32.** (Original) The method of claim 29, wherein the evaluating
2 comprises evaluating lines in the projection pattern for discontinuities.

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4 **33.** (Original) The method of claim 29, wherein the evaluating
5 comprises evaluating lines in the projection pattern for changes in brightness.

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7 **34.** (Original) The method of claim 29, wherein the evaluating
8 comprises evaluating lines in the projection pattern for changes in slope.

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10 **35.** (Original) The method of claim 29, wherein the evaluating
11 comprises:

12 measuring distance between the lines within the projection pattern; and
13 determining if the measured distance is within a threshold of an appropriate
14 value.

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16 **36.** (Currently Amended) A method, comprising:
17 ~~projecting~~ forming an optical pattern within a cargo space, wherein the
18 pattern is formed by projection and by lines formed by intersection of planes
19 forming the cargo space; and

20 analyzing the optical pattern to determine whether cargo is present within
21 the cargo space.

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23 **37.** (Original) The method of claim 36, wherein the optical pattern is
24 defined by tracing with a laser.

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2 **38.** (Original) The method of claim 36, wherein the analyzing comprises
3 detecting differences in brightness between parts of the optical pattern.
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5 **39.** (Original) The method of claim 36, wherein the analyzing comprises
6 evaluating lines in the optical pattern for unexpected slopes.
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8 **40.** (Original) The method of claim 36, wherein the analyzing
9 comprises:
10 measuring distances between lines within the optical pattern; and
11 comparing the distances to an expected distance.
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13 **41.** (Original) The method of claim 36, wherein the analyzing
14 comprises:
15 detecting laser lines within the image; and
16 comparing the laser lines detected to a projection pattern image library.
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18 **42.** (Original) The method of claim 36, wherein the analyzing comprises
19 comparing the optical pattern to images within a projection pattern image library.
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21 **43.** (Original) The method of claim 36, wherein the analyzing comprises
22 comparing the optical pattern to a projection pattern image library comprising
23 images of empty cargo areas and cargo-containing cargo areas.
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